Michael Saxon

Last update on February 25, 2019

mssaxon@asu.edu • +1 480 296 4216 • saxon.me • www.linkedin.com/in/mssaxon

Skills

Conceptual – Computational linguistics, DSP, embedded programming, sensor fusion, FPGA development, deep learning, multimedia processing

Software – Python (Pytorch, Numpy, SciPy), C/C++, OpenCV, HTK, Kaldi, Verilog, MATLAB, Linux

1^{st} *Author Papers* – {Objective measures of plosive nasalization in hypernasal speech, ICASSP 2019 (accepted)},{Word pair convolutional model for happy moment classification, AffCon 2019 at AAAI}}

Selected Coursework (400-Grad)

ML, Stats – Random Signal Theory; Deep Learning for Media Processing; Information Theory

DSP, Speech, Linguistics – Digital Image/Video Processing; Speech Processing, Recognition, and Compression; Real Time DSP; Linguistics; Syntax

Math, CS – Cryptography; Applied Computational Methods; Advanced Lin Alg, Numerical Computing; Foundations of Algorithms

Education

Arizona State University — Tempe, AZ

MS Computer Engineering, *Grad. cert. in Linguistics*, 4.0/4.0 — *Aug 2018 – **Dec 2019***

Concentration in Multimedia Signal Processing and Deep Learning

BSE Electrical Engineering, *Minor, Mathematics*, 3.6/4.0 — *Aug 2014 – **Aug 2018***

Magna Cum Laude. **Student Orgs:** *Sun Devil Robotics Club* {President 2016 – 2017, Treasurer 2015–2016}, *Data Analytics Club*, **Honor Societies:** *IEEE-Eta Kappa Nu*, *Phi Kappa Phi*

Barrett, the Honors College – Thesis: **Spoken Nasality Detection with Goodness of Pronunciation**

Experience

Aural Analytics — Scottsdale, AZ

Speech Research Engineer — *December 2018 – present*

Developing speech-based neurological health assessment metrics using cloud and custom ASR, DSP.

Center for Cognitive Ubiquitous Computing & Brain Behavior Health Analytics Lab — Tempe, AZ

Graduate Research Assistant (joint funding from above) — *December 2018 – present*

Designing and conducting user studies on use of "haptic facial action units" as a social interaction assistive technology for blind individuals. Particular consideration toward experiment statistics and conditions to achieve expressive results for HCI venues.

Student Researcher — *August 2017 – December 2018*

Created novel ASR-based feature for nasality using Kaldi, paper to be published in ICASSP 2019. Created speech nasality measurement NNs. Aided in design of deep neural networks for multimodal emotion recognition (emphasis on speech), published in HCI International 2018.

The Luminosity Lab, an ASU Strategic Initiative — Tempe, AZ

Graduate Research Assistant — *May 2018 – December 2018*

Designed novel word pair convolutional model for semantic modelling tasks, and presented in a talk at the Workshop on Affective Content Analysis at AAAI 2019.

AI/ML Working Group Member — *August 2016 – December 2018*

Created engaging conversation modelling software for chatbots in a lifelong learning environment. Built geofencing code for autonomous self-charging drones.

General Dynamics Mission Systems — Scottsdale, AZ

Embedded Software Engineering Intern — *May 2017 – August 2017*

Performed software-level regression testing for the HOOK 3 Combat Survival Radio system. Wrote test scripts and technical reports. Identified software defects tied to issues found and verified correct solutions within a fast-paced Agile dev cycle.

Engineering Tutoring Center at Arizona State University — Tempe, AZ

Tutor — *October 2015 – September 2016*

Explaining concepts from math, physics, and engineering classes to facilitate better student performance. Answering questions, giving homework and project help, and hosting review sessions.

Nanoelectronics and Integration Lab at Arizona State University — Tempe, AZ

Undergraduate Student Researcher — *June 2014 – December 2016*

Developed control software for a rapid, automated optical semiconductor strain analysis system. Our submission won the Texas Instruments Outstanding Student Interactive Presentation Paper Award at the 2016 IEEE Electronic Components and Technology Conference.